GAU 1621

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants: Buchwald, S.L. et al.

Examiner: Barts, S.

AUG B U 2001

Application Serial No.: 09/239,024

Art Unit: 1621

TECH CENTER 1600/2900

Filed: January 27, 1999

Atty. Docket No.: MTV-009.02

Title: Arylation and Vinylation of Activated Carbons

Assistant Commissioner for Patents Washington, DC 20231

Certificate of Mailing

I hereby certify that this "Declaration Under 37 CFR § 1.131" is being deposited with the U. S. Postal Service as First Class Mail with sufficient postage on the date set forth below in an envelope addressed to:

Assistant Commissioner for Patents, Washington, D.C. 20231.

Date of Signature and Mail Deposit

Dana Gordon

Declaration Under 37 CFR § 1.131

Dear Examiner Barts:

As an inventor named on the above-identified application, I hereby declare that the subject matter of rejected claims 1-35 was invented in the United States prior to the effective date, October 16, 1997, of United States Patent 6,057,456.

In support of this Declaration, I attach hereto copies of pages, with their entry dates redacted, from laboratory notebooks maintained by me or one or more of my joint inventors, establishing a reduction to practice of the subject matter of the rejected claims prior to the effective date, October 16, 1997, of United States Patent 6,057,456. Notwithstanding the fact that the entry dates on these pages have been redacted, I hereby declare that these documents establish that a reduction to practice of the subject matter of the rejected claims took place in the United States prior to the effective date, October 16, 1997, of United States Patent 6,057,456.

I hereby declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Stephen L. Buchwald: Stephen L. Buchwald Date: 8/23/01

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Obstance of This Paris
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284 SI-Et+ Et Newton Polithon, Tol-6 mp, Buyllote, Toler, 200 p/2
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Or 1 A + C) + While I
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302 Tol + Marin Alulia, The Brown Isol gull
302 Tol + Marin Alulia, The Brown
THY, 70"

303 TOLK OF OID + New 48, Eduction, Tol-Brown
THE, 70"

09/239,024

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Compound tilly brimbages Cyclistonia 1621 Phyllons	MW 213.12 86.13 23.44 415.7	5.0 6.0	2.5 3.0 0.001	55 ml 363 ml 12 Ong 6 4 mg	solini
Tol-Ring	678.74	0.03P	0.048	4 ml	

An over dead Schlad flood equipped a stribon was dunged in Nath, evoluted and book felled in argon.
To this was added 3 ml of Tolume and cycloherand. The nightness was hested to 70° for 10 mm, at with these E-Botyl Evonologers,
Ph. shows, Tol-Burg and Int of Tolume was orded. The resulting materia was hested to 70° while while augm.

11/20141- 0/E=15/2/5, 700/ oliquet 04/3 mp 41-11-282-1 878 67/3 2.78 prod, 2.78 9

MP 6CMS-IJ - 282-1

81	0 th	14 Pd 2 Uhre	Tolkino
Lo)	+ 12)+1	Tolian,	70%
		NUDAZ	

Compound MN	equiv	mms	amont
+ Buty brandage 213.12	// // //	6.5	55w
Cylobrand 86,1)			Di) ul
N.W. (608) 23.47	,	1.0	40mg
Pludas 905.)		0.00)	C-4 roug
# Na 04 87,03		0.5	41. 0 mg
Tol-Bing 676.74	0.036		12.2 mg
The		and the contract of the second of the second	32

An over down Schlart, flood containing a oth for was changed at North, evoluted and book peled at anyon: To there was obtained + both terminations, Michology, No the pand Ind there are Cyphological and I where the northern was hated to - 10 min of 7000 at which two I butly hundrages, Plants, To I Berry, Washe and I be there was odded, the matter was hated to 7000 while purples argue.

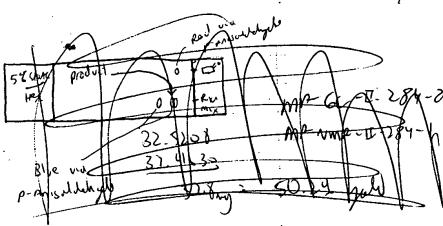
11)76/96 - ofte 1 Thom, Took oliquet or 6 MP 4(-17-283-1 656 0) (5) Set Ot 39 CT

THF, 70" 23035	3/ → +	+ Nult	Pd. May 131-8-4	230.35
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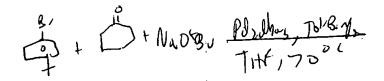
Can	MN	equi	mule	mont
tomound tobylesnuheyes	213.12	F1.0	0.5	55m
(400 last and	86.13	1.2	0-6	8/w
Cyslongrand Nott 6091	23.49	2.0	1.0	90m
Pastles	415.7	DON P	0.007	6.9m
Jol-6mg	674.74	0.731	2,211	Merch
Tolueno			١	3~X

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11/26/11 - aft = 20 hour, books dupont u oft \$ =0 MP-CI-TI-284-1 674 55, 57 49 58



	Br	, A	ld,	Shaz 71-B.	V.	
	[3] +	1	VuDTGU	Whaz, 721-B.	» (<u> </u>
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Compound	NW	equin	mulo	ement	som	
& Brid Brankeyho		1,0	0.5	- A		
Cylinesanon	18.15	1.2	0.6	6 Livel		<u></u>
Naves	16.7		0.65			
	9150		60075	6.4m		·
101-Rimp	77804	0.036	0.008	12.2 %		
_ Blueno				32		
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hanged v 2 wl 1 Tol ylohoxonno	1 N.05	Su (hand	tobod, P.	1. Mas, to	beling and	···································
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- h 70°(while and	der angen			,	;
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left	Show	rouk	liquit_ M	120-11-28 Thes	5-1	
	5.8 <u> </u>	, . 6I84	PNJ - 0	Thes		
F					MICHAEL CHEST NO TIME	
				.22		



Compound equin. MW 0.5 (0.31) kitchy biomsegue 213.12 620 1.2 iydoharanne 98.15 6 Jmg 0.65 Nuobes 1.7 96-1 6.43 0-0071 Parthy 115,1 12, Vag 0.368 6.78.74 701-B:--P 3,334 TH

An oven dued Schlank flook contouring a stir bar was changed of NaOto (Box), Pl, Itaz and Tot-Burge (under argun). To this was added THT, t-British Browligene and approhetowore. The resulting mixture was heated to Too while under argun.

Me 6 hm, 70st chiquet - MF617-282-1 23E Co. 736 prod, NO EM, NO ES

		pad P.	wed shape	
24 Chy	trogen -	0 6 60	MP-60-	11-186-2
<u> </u>	-p-Amouldy	3). 5206 37-4632 57.8 mg	MP-NM 793 yord	e-11. 76-2

		1 don	By Pan	May 701 hour	7
L Q)		digo.	Me, 70°	
1					
Componi	MW	equiv	mondo	amount	pound
4 Brombezontale	18203	1.0	0.5	914	0.147
Cycloheyanan	48.15	1-2	0.6		
N20 6 8 1 (971)	96.7 678.79	0,036	0.65	(5 m)	
Johnson Johnson	6/11/1			321	
Odyllous	avi	0.018	0,0045	6,4ng	
			11 1		
					unerg is the
har was changed	Luce I Il	42 de 60 00	, ras ma	this your a	dded
then 2 ml of To	me la	1 Tolune	The min	time ungs	hested +
7011 while 1	under any				
					<u> </u>
after 4 h	m Tolk	oligient	MI-6	C-I-187-	/
· · · · · · · · · · · · · · · · · · ·			· 		
			، معمد مصلت ی		

Compound to his browbages Cylohea anus North (609) Pd, May	MW 213.12 93.13 23.49 915.7 678.74	1.0. 1.2. 1.3. 0.01.	0.6 0.6 0.65 0.0075	omont 55M 62 M 26 my 6.9 m 12 hrs	20W
Tober of	678.74	0-0 \$ <i>E</i>	<i>0.3.</i>	3.1	

On over dred Schlert floor contaming a the bar was changed it Nath, exocuted and bod felled it aryon. It flir into sold Philhas, for Birg, & Botyl Branchezer, cyclohoxanin and 3 Il Tolues. The mixture was bothed & 7500 while sends

MP 61-T-188-1 486 D 468 SM

<i>Q</i> /	3	. A &d	Dd . May	tul-B. 24	
- (o)	+-(-)	-t1Vad-4	THF,	50°C	
سل			: } 		
Compand	m	_cquv	mml	amont	nouw
1	213.12	1.0	0-5	55ml	
lylhegame	98.15	1-7	36	62 W	
Notes	467	1-3	065	65 mg	
Paylous	915,7	0.015	0.075	6-43	
- 701-Bing	67874	0-036	0.01	12.2	
TH+			<u> </u>	31	
		1 0 0	1.4	/	di lu
<u>O</u>	a oren d	hed Schl	lank flash	- Covaring	a dy lear
was chan	yed_Avo	TBU Pds	11 July - 10)	Led 1	enoted and getcheparent and le sendor anyon
- bod fille	al al ary	wr. 4-1	hy mos of	b 50% while	le junda anjon
3 2 ()	At the	miskue_1	MD porce	din Jimi di	<i>/</i> ·
you o	Morron	K eu	SM, 6	-61-II-284-).39 prod	
<u> </u>		-J- 0.4.			
				in the second se	
Name of the same of the same of the			1		

1

Stant 1: Up

mul equin MW Compound 55ml O. T 213.11 1.0 0.1 WN.53 1.2 Cycloherand 9642 M.C.D 2.0 Net (60%) 23.14 150.8 2 10 Buy 1 3 Ac (958) 301.5 1.00 X 6.4 mg 1,5.7 ひっく Plillery 12.27 8100 2000 12-Donne Pr. 868 3,5 Jelma

An over ined School flock containing on this has
was hanged it that, Bog Ni Ac (in the bin), Pl, Mber 70-5 hap
and was arounded and book felled int origin. 20 Mise nows
added A, engloberand and 3 of Jelius. He material was
listed to so while under origin.
After 3 hour, Took object. MP 61-1-240-1
846 D, 201 Es, 298 5 Pt 2.41

11/30/41

ape 27 h.s. - Took alyal MP-61-11-240-1

358 9 218 5, 378 27=2.411

ھ خے	+ 0	+ Na, w, -	Parlbas Tu-B		Shut 1:00
Compound 2 Cydalfand 2	213.12 - 18.15	1,0 1,2	0.5 0.6 0.65	amont 55Al 62ml	
Pas los Pas llos Dol-B.m TAF	10581 915.7 127871	6.045 0.06	6.0017 0018	69.8 mg 6.9 m 11.2 g	
har was	haryed N	nos lovers	flack agus Dd. Alsa,	and 701-B. A folled w	ayer.
ins hold it	5 odded 70° while	1, 2 or	nd. 3 al. 1-]. y-n	Itt. No ma	Tens
11/3J4- 41 MP	000, 100/F 0, 48 l	Son 100	MP C(-15-)4 0/01. Laligue	<u></u>	
	- 6C-I-24	1-2 456	٠	K Sm	NS Prod.

B1	o
(O) +	+ Neobby Pdr Mars, DAPP
7	THF, 50°C
1	,

Shut I:WA

1 A771 Cychremore Naotes (474) Phadoas Oppp	MW 213.12 18.15 41.7 415.7 412.46	1.2 1.2 1.3 0.017	mm/o 0.5 0.6 0.65 0.65	amount 4 onl 62 orl 65 org 6.40 7.42 or 3.1	romo	1.224
THF			:	<i>∽</i>		

Oppe, orouted and both folled at aryon. I thin mer added.

1, appliesance and THY. We mistine now hated & TO"

while ender aryon

Often 3 hrs, Tost oliquet - MPG(T-242-1 5 351-50, 65 8 SM.

12/111- After 24 hm, Tout object AFG-11-242-1 156 0, 86 0, 634 5M, 26 1/00.

Start (201)

mm.le. amount Compound que. MW 40,0 0.5 1.0 2 (1) 213.12 1,7 06 Cydoteroma 18,15 0.65 65m 1.3 Naot & 1971) 16.7 9157 6.9 mg 0.0075 0.015 Pdz Shows 102 4.03 81008 554.34 DPPF 3~J 746

Oppf, eventel and bock filed of argen - 7. the wax orders

1 cyclobalance, 7 Ht and the meeting was boiled to 500

Lib unde argon

after 3 hom, Took alyest mp-61-11-243-1 239 6, 3.51 0, 41.68 Sm, 264 p.10 J.

12/1/46 - After 24 how, , Took aliquet MPG1-5-293-2 15.75 0, 19.48 Qt, 181 SM, 37.75 Prod.

+		hworb	Pasitions, Plotoys,
j	7		

Shat I: WA

Compound	MW	yen.	mule	amount	Sour
1 (97)		145.	: 0.5	400	
hysheroms		1.7	. 0.6	62m	
Nioto (97		1.3	. 0.67	65 m	
Pl. My	115.1	0.315	0.03 5	6.9 m	
Plant	304.37	7ن.0	0.035	10.7mg	
7 4-6-	E o			3~1	

changed I No OKON, Pd, ilbas, PH dyl, and was avocided in book felled it anyon. I there was added 2 and 2 and 2 and THF. We winter was boiled to TOOK while sures are

4th 3 hm, Took aliqued - MA 6(-4-244-1
68 0, 32% 1, 299 SM, no prod
12/1146. At 24/hom, took aliqued MA 61-4-244.7
59. 0, 347 1, 221 SM, 29 prod.

Compound 2 (472)	MW 213.12	egun 10	mmlo 0.5	amount 10ml
Cyclobelanov	48.1	1.2	0,6	62 ml
N NO 4 BU (472)	960)	1.3	0.65	65mg
Pdz slows	915.	0015	מריטט.ס	6.9m
701-B.ng.	١٢.١٢	0.27	0.568	12.2~
THE				S~I

On orn School flook was changed of Nation, Policibres, til-Brup and was evocated and book follow I organ. E this was odded I and I, THY and the nixture hodel to 50°C whele under argan

after 3 hrs, took oliquid - MP-66-17-295-1 258 \$ 319 prod.

121,191. 24 hs, mp-61-17-245-2 7.56 CDT 26 CDT 868 prod.

> 46. 4443 46. 3700 79.3.mg - 658 yald

B1	Now By Pdy Mas, DAPE	J m 3: Wp_
(a) 1 (-) 1	THY, 50°	
1 2		

amont minule Compand MMquin 2.5 MOP 21311 0.6 blul 1.2. 98.11 Cycloha Konor 0.65 6 Jany 1.3. 96.7 Nuorg. 6.4 mg 9151 8.015 0.005 Pa- Waz 西, 声, 7.2 m 0.018 0.034. DOBE 7h(

Undter, Pl, dba, OPPE and not evocated and both filled of argun. To this more odded I, Z, THE and the resultary mixture booted to 500 while under argun.

1) after 18 hs- took object MFG1-15-242-1 46 Of 698 Sry No prod.

12/3/92 44h-s-tark oliquet MP-61-0-246-2 78 @t 6285m No prod

09/239,024

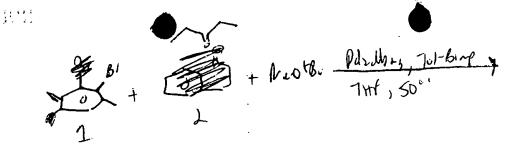
761-Bing 678.74 0:35 0:36 12.2mg	Compound Na 0°B, Pd, Jb., Tol-B.,	MW 207.08 1342 96-7 915.7 678.74	1.2	0.6 0.6 0.6) 0.6) 0.037 0.037	amont 108 at 80 at 65 ms 6.4 m 12.2 mg	soun	loor
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12/2/91- Oft = 18hs, Took oligent -MP-G1-II-331-1 356 SM 448- PT: 4.883

MP 6cms-II - 301-1 M2=240

12/3/41 - 6/th 244 how, 76016 oliquet MD-61-0-301-2 48 reduced (unphtholia) 299 SM 598 prod RT: 9.642

136.8 m 828 yuld



Start 3:0/p

1.301

1504 0811

Compan	MW	gun	mul	annel
4	18507	100	0.50	67 pl
2	Les 4 86.17	1.2	0.60	64N
Na Oth.	96.7	1.2	0.65	6 Jm
Phy Shey	9157	01015	1-047	6.93
Tol-Bing	61879	0.032	0.518	12.2m
THY				- ~b

MP-61-II-3021 56 Augleno MP-61-II-3021 56 Augleno 8565M

1213/96 After 2 44 hours, 7001 chiquit
MP-61-5-3022 4.64 xylene
82.89 SM

09/239,024

1 2 + NaOtBo Planthay Tot-Bay: Shut July

amount mwlo equin Compand Mw. 1514 76W 224.03 1.0 0.5 80 ml 1,2 0.6 14611 65mg 0.65 96.7 Viotos 1.3 6.9m 915,7 0.0075 pla llang 0.015 12-2 mg 0.318 0.031 73-Bing 678,79 32 JH4

12/2146- of 18h, Took oliquet

MP 65-#-303-1 358 AT= 3.869 624 AT- 11.260

: Idslan - ifter 44h Took alrywet

M2-66-12 3-3-5